Amendments to the Specification:

Please replace paragraph **[0015]** beginning at page 4, line 19, with the following:

--**[0015]** Figure 1 shows the alignment of TGR4a (SEQ ID NO:2) (also referred to as HM74) and TGR183 (SEQ ID NO:6).--

Please replace paragraph **[0035]** beginning at page 7, line 23, with the following:

--**[0035]** The terms "GPCR" and "TGR4", or "TGR183" therefore refer to nucleic acid and polypeptide polymorphic variants, alleles, mutants, and interspecies homologs and GPCR domains thereof that: (1) have an amino acid sequence that has greater than about 65% amino acid sequence identity, 70%, 75%, 80%, 85%, 90%, preferably 91%, 92%, 93%, 94%, 95%, 96%, 97%, 98% or 99% or greater amino acid sequence identity, preferably over a window of at least about 25, 50, 100, 200, 500, 1000, or more amino acids, to a sequence of SEQ ID NO:2, SEQ ID NO:4, SEQ ID NO:8, or SEQ ID NO:6; (2) bind to antibodies raised against an immunogen comprising an amino acid sequence of SEQ ID NO:2, SEQ ID NO:4 or SEQ ID NO:6 and conservatively modified variants thereof; (3) have at least 15 contiguous amino acids, more often, at least 20, 30, 40, 50 or 100 contiguous amino acids, of SEQ ID NO:2, SEQ ID NO:4, SEQ ID NO:8, or SEQ ID NO:6; (4) specifically hybridize (with a size of at least about 100, preferably at least about 500 or 1000 nucleotides) under stringent hybridization conditions to a sequence of SEQ ID NO:1, SEQ ID NO:3, SEQ ID NO:7, ~~, SEQ ID NO:7,~~ or SEQ ID NO:5 and conservatively modified variants thereof; (5) have a nucleic acid sequence that has greater than about 95%, preferably greater than about 96%, 97%, 98%, 99%, or higher nucleotide sequence identity, preferably over a region of at least about 50, 100, 200, 500, 1000, or more nucleotides, to SEQ ID NO:1, SEQ ID NO:3, SEQ ID NO:7, or SEQ ID NO:5; or (6) are amplified by primers that specifically hybridize under stringent conditions to SEQ ID NO:1, SEQ ID NO:3, SEQ ID NO:7, or SEQ ID NO:5. This term also refers to a domain of a GPCR,

as described above, or a fusion protein comprising a domain of a GPCR linked to a heterologous protein. A GPCR polynucleotide or polypeptide sequence of the invention is typically from a mammal including, but not limited to, human, mouse, rat, hamster, cow, pig, horse, sheep, or any mammal. A "TGR4 or TGR183 polynucleotide" and a "TGR4 or TGR183 polypeptide," are both either naturally occurring or recombinant.--

Please replace paragraph **[0136]** beginning at page 31, line 2, with the following:

--**[0136]** Immunoassays in the competitive binding format can also be used for cross-reactivity determinations. For example, a protein at least partially encoded by ~~SEQ NO:1~~ SEQ ID NO:1, SEQ ID NO:3, SEQ ID NO:7, or SEQ ID NO:5 can be immobilized to a solid support. Proteins (*e.g.*, GPCR proteins and homologs) are added to the assay that compete for binding of the antisera to the immobilized antigen. The ability of the added proteins to compete for binding of the antisera to the immobilized protein is compared to the ability of GPCRs encoded by SEQ ID NO:1, SEQ ID NO:3, SEQ ID NO:7, or SEQ ID NO:5 to compete with itself. The percent crossreactivity for the above proteins is calculated, using standard calculations. Those antisera with less than 10% crossreactivity with each of the added proteins listed above are selected and pooled. The cross-reacting antibodies are optionally removed from the pooled antisera by immunoabsorption with the added considered proteins, *e.g.*, distantly related homologs.--

Please replace paragraph **[0173]** beginning at page 42, line 1, with the following:

--**[0173]** Common linkers such as peptides, polyethers, and the like can also serve as tags, and include polypeptide sequences, such as ~~poly-gly~~ poly-Gly sequences of between about 5 and 200 amino acids (SEQ ID NO:9). Such flexible linkers are known to persons of skill in the art. For example, ~~poly(ethelyne glycol)~~ poly(ethylene glycol) linkers are available from Shearwater Polymers, Inc. Huntsville, Alabama. These linkers optionally have amide linkages, sulfhydryl linkages, or heterofunctional linkages.--

Please insert the accompanying paper copy of the Sequence Listing, page numbers 1 to 9, at the end of the application.